IN THE CLAIMS

1. (Currently Amended): A scanning exposure method for transferring a pattern formed on a mask to a divided area on a substrate through a projection optical system, and synchronously moving said mask and said substrate with respect to an illumination
light along a synchronous moving direction of said substrate, said scanning exposure method comprising the steps of:

determining a ~~surface condition~~ spatial frequency distribution of the divided area along said synchronous moving direction of said substrate;

deciding to use either a first focusing control mode providing substrate tilt changing control or a second focusing control mode maintaining substrate tilt unchanged as a decided mode when said pattern is transferred onto the divided area depending on the ~~surface condition~~ spatial frequency distribution of the divided area determined by the determining step and a width of an illumination area on the substrate in the synchronous moving direction; and

transferring the pattern formed on the mask onto the divided area while performing said focusing control in the decided mode ~~and while synchronously moving said mask and said substrate~~.

2. (Canceled)

3. (Currently Amended): The scanning exposure method according to ~~claim 2~~ claim 1, wherein

said first focusing control mode performs a tilt control to change substrate tilt in ~~a direction of~~ said synchronous moving direction of said substrate, and said second focusing control mode maintains unchanged substrate tilt in the ~~direction of~~ the synchronous moving direction of the substrate.

4. (Canceled)

5. (Currently Amended): The scanning exposure method according to ~~claim 4~~ claim 3, wherein

said substrate is controlled by using said first focusing control in said first mode when a predominant wavelength is equal to or longer than a length corresponding to said ~~slit~~ width of the illumination area in the synchronous moving direction of said substrate, the predominant wavelength corresponding to a predominant frequency that has a maximum amplitude in said spatial frequency distribution; and

said substrate is controlled by using said focusing control in said second mode when a predominant wavelength is shorter than the length corresponding to the ~~slit~~ width of the illumination area in the synchronous moving direction of said substrate.

6. (Currently Amended): The scanning exposure method according to claim 5, wherein

said length corresponding to said ~~slit~~ width of the illumination area in the synchronous moving direction of said substrate is ~~the~~ a slit width.

7. (Currently Amended): The scanning exposure method according to claim 1, wherein

said ~~surface condition~~ spatial frequency distribution of said divided area is determined prior to said transfer of said pattern on said mask onto the divided area.

8. (Currently Amended): The scanning exposure method according to claim 7, wherein

said ~~surface condition~~ spatial frequency distribution of said divided area is determined in every lot of said substrate on which said pattern formed on said mask is transferred prior to said transfer of the pattern.

9. (Currently Amended) The scanning exposure method according to claim 7, wherein

said ~~surface condition~~ spatial frequency distribution of said divided area is determined in every exposure process of said transfer of said pattern formed on said mask onto said substrate prior to said transfer of the pattern.

10. (Currently Amended): The scanning exposure method according to claim 7, wherein

a plurality of divided areas are arranged on said substrate; and

said ~~surface condition~~ spatial frequency distribution of said divided area is determined by determining the ~~surface condition~~ spatial frequency distribution of one of the plurality of divided areas.

11. (Previously Amended): The scanning exposure method according to claim 1, wherein

a focusing control is provided that includes a focus position control that controls a position of said substrate in an optical axis direction of said projection optical system; and

when it is decided that said focus position control cannot be performed, following said synchronous moving, a control is performed to maintain said substrate at a position just prior to the decision in an optical axis direction of said projection optical system.

12. (Previously Amended): The scanning exposure method according to claim 1, wherein

a focusing control is provided that includes a tilt control of said substrate in said synchronous moving direction; and

when it is decided that said tilt control cannot be performed, following said synchronous moving, a control is performed to maintain a tilt of the substrate just prior to the decision in said synchronous moving direction.

13. (Previously Amended): The scanning exposure method according to claim 1, wherein

a focusing control is provided that includes a tilt control of said substrate in a direction perpendicular to said synchronous moving direction and an optical axis direction of said projection optical system; and

when it is decided that said tilt control cannot be performed, following said synchronous moving, a control is performed to maintain a tilt of the substrate just

prior to the decision in said direction perpendicular to said synchronous moving direction and said optical axis direction of said projection optical system.

14. (Canceled)

15. (Canceled)

16. (Currently Amended): A scanning exposure apparatus which is used to transfer a pattern formed on a mask onto a divided area on a substrate through a projection optical system, and synchronously moving the mask and the substrate with respect to illumination light along a synchronous moving direction of said substrate, said scanning exposure apparatus comprising:

a mask stage which holds the mask;

a substrate stage which holds the substrate;

a first detecting system which detects a position for at least one of detection point in an optical axis direction of said projection optical system, wherein the detection point is in a illumination area on said substrate surface;

a first driving system which drives the mask stage and the substrate stage in planes perpendicular to said optical axis direction of said projection optical system;

a second driving system which drives the substrate stage to at least one of the optical axis direction of the projection detecting system and a tilt direction;

a memory unit which stores a data representing a ~~surface condition~~ spatial frequency distribution of said divided area along said synchronous moving direction of said substrate; and

a control system which synchronously moves the mask stage and the substrate stage by controlling the first driving system, while performing said focusing control by controlling the second driving system based on a result from the first detecting system, wherein a focusing control mode to be used in the transfer of a pattern onto said divided area is decided from a plurality of focusing control modes based on the data representing the ~~surface condition~~ spatial frequency distribution of the divided area and a width of an illumination area on the substrate in the synchronous moving direction.

17. (Canceled)

18. (Currently Amended): The scanning exposure apparatus according to ~~claim 17~~ claim 16, wherein

said plurality of focusing control modes include a first mode in which a tilt control in a direction of said synchronous moving of said substrate is performed ~~by following up~~ following the synchronous moving, and a second mode in which the tilt control in the direction of the synchronous moving of the substrate is not performed ~~by following up~~ following the synchronous moving.

19. (Canceled)

20. (Currently Amended): The scanning exposure apparatus according to ~~claim 19~~ claim 18, further comprising a second detecting system which detects a tilt of said substrate stage in said synchronous moving direction to a virtual plane perpendicular to said optical axis direction of said projection optical system and in a direction perpendicular to the said synchronous moving direction; and

said control system performs said focusing control based on detection results from said first and second detecting systems.

21. (Currently Amended): The scanning exposure apparatus according to claim 20, wherein said plurality of focusing control modes further include a third mode which maintains said surface of said substrate stage in parallel with said virtual plane based on a detection result from said second detecting system, and

said exposure apparatus further comprises a calculating operation unit which acquires detection result data by using said first detecting system during said synchronous moving under the focusing control in said third mode, and the exposure apparatus obtains said ~~surface condition~~ spatial frequency distribution of said divided area based on the detection result data.

22. (Currently Amended): The scanning exposure apparatus according to claim 21, wherein

said calculating operation unit calculates said spatial frequency distribution formed by ~~said~~ concave and convex substrate parts forming a repeating unit area of said pattern to be transferred in said divided area along said synchronous moving direction of said substrate, wherein the concave and convex substrate parts are further formed to be convex and concave in said optical axis direction of said projection optical system ~~are formed in said area for repeating unit of a pattern to be transferred in said divided area~~; and

then the calculating operation units obtains a predominant wavelength corresponding to a predominant frequency which is maximal in the spatial frequency distribution to store in said memory unit as said data.

23. (Currently Amended): A making method of a scanning exposure apparatus that transfers a pattern formed on a mask onto a divided area on a substrate through a projection optical system, while moving said mask and said substrate synchronously with respect to an illumination light along a synchronous moving direction of said substrate, said making method comprising:

providing a mask stage that holds said mask;

providing a substrate stage that holds the substrate;

providing a first detecting system that detects a position in an optical axis direction of said projection optical system of at least one detection point within an illumination area on a surface of said substrate;

providing a first driving system that drives the mask stage and the substrate stage in a plane perpendicular to said optical axis direction;

providing a second driving system that drives the substrate stage ~~to~~ in at least one of the optical axis direction and a tilt direction;

providing a memory unit that stores data representing a ~~surface condition~~ spatial frequency distribution of said divided area along said synchronous moving direction of said substrate; and

providing a control system that obtains ~~a surface condition~~ the spatial frequency distribution of ~~he~~ the divided area, decides a focusing control mode to be used when transferring ~~a~~ the pattern onto said divided area as being either a first focusing control mode or a second focusing control mode based on the obtained data representing the ~~surface condition~~ spatial frequency distribution of the divided area

and a width of an illumination area on the substrate in the synchronous moving direction, and performs said decided focusing control mode by controlling the second driving system based on a detection result from the first detecting system, while synchronously moving the mask stage and the substrate stage by controlling the first driving system, wherein the first focusing control mode performs a tilt control of the substrate while said pattern is transferred onto the divided area and the second focusing control mode maintains a tilt of the substrate while said pattern is transferred onto the divided area.

24. (Previously Amended): The making method according to claim 23, further comprising:

providing a second detecting system that detects a tilt of said substrate stage in said synchronous moving direction and in a direction perpendicular to said synchronous moving direction, in respect to a virtual plane perpendicular to said optical axis direction of said projection optical system.

25. (Currently Amended): The making method according to claim 24, further comprising:

providing a calculating operation unit that acquires detection result data from said first detecting system during said synchronous moving under a focusing control that maintains a surface of said substrate stage to be substantially parallel to said virtual plane based on a detection result from said second detecting system, and obtains said ~~surface condition~~ spatial frequency distribution of said divided area based on said detection result data.

26. (Currently Amended): The scanning exposure method according to claim 1, wherein said focusing control mode is decided prior to ~~a transfer operation to~~ the step of transferring the pattern formed on the mask onto said divided area.

27. (Currently Amended): The scanning exposure apparatus according to claim 16, wherein said control system decides said focusing control mode prior to ~~a~~ the transfer ~~operation to~~ of the pattern onto said divided area.

28. (Currently Amended): The scanning exposure apparatus according to claim 23, wherein said control system decides said focusing control mode prior to ~~a~~ the transfer ~~operation to~~ of the pattern onto said divided area.

29. (Currently Amended) A device manufactured by using said exposure apparatus according to ~~one of claims 16 to 22, and 27~~ claim 16.

30. (Currently Amended) A device manufacturing method including a lithographic process, comprising:

transferring a predetermined pattern ~~is transferred~~ onto a divided area, which is divided by street lines on a substrate, by using ~~said~~ the exposure method according to ~~any one of claims 1 to 15, and 26~~ claim 1.